



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,195	06/28/2000	Pradeep Bahl	204205	7584

23460 7590 02/03/2004

LEYDIG VOIT & MAYER, LTD  
TWO PRUDENTIAL PLAZA, SUITE 4900  
180 NORTH STETSON AVENUE  
CHICAGO, IL 60601-6780

EXAMINER

WU, ALLEN S

ART UNIT	PAPER NUMBER
----------	--------------

2135

DATE MAILED: 02/03/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/607,195

Applicant(s)

BAHL ET AL.

Examiner

Allen S. Wu

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 . 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "204" and "304" have both been used to designate DCHP server. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-12, 14-19, and 21-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Massarani, US Patent 6,393,484, in view of Kent et al, Security Architecture for IP.

As per claim 1 and 6, Massarani discloses a method for controlling access to a network by a client (abstract), the method comprising: assigning a network address to the client (col 5 ln 1-25), wherein the network address has a lease period (col 3 ln 60 – col 4 ln 9); sending the assigned network address to the client (col 3 ln 60 – col 4 ln 9); sending the address of an access point to the

client, wherein the access point is adapted to provide access to the network for the client (address of router, col 5 ln 1-25); and, if the client fails to establish a link with the access point (col 3 ln 60 – col 4 ln 9) and fails to request a renewal of the assigned address within the lease period (col 7 ln 1-8), invalidating the assigned network address, thereby preventing the wireless client from accessing the network (revoke the IP lease, col 4 ln 1-9).

Massarani discloses a client and an access point as described above and variations of wireless access technology (col 1 ln 45-50). However, Massarani does not explicitly teach the client and access point being a wireless client and a wireless access point. Wireless access points provide the same functions as regular access points except for the use of wireless clients. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to adapt a wireless access point to provide access for a wireless client because it would have increased flexibility of Massarani's system by adding mobility to the client's terminals.

Furthermore, Massarani discloses establishing communication between a client and a network (abstract). However, Massarani does not explicitly teach establishing a secure link. Kent et al discloses a method of establishing communication between a client and a network using a secure link (page 7 section 3.3). Both Massarani and Kent et al disclose a method of network communication security. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Kent et

al within the system of Massarani because it would have increased security through a higher degree of authentication between the client and the access point.

As per claim 2 and 7, Massarani further discloses the assigned network address and the wireless access point address are sent to the wireless client in a DHCP offer packet (DCHP server assigns...and sends col 5 ln 1-6; It is noted that Massarani does not explicitly state a DHCP offer packet. However when using DHCP, the packet containing an assigned network address and the wireless access point access is known as a DHCP offer packet. Therefore, the DHCP offer packet is to be inherent to the teachings of Massarani).

As per claim 3 and 8, Massarani does not explicitly teach establishing a secure link. Kent et al discloses a method of establishing communication between a client and a network using a secure link (page 7 section 3.3), wherein the secure link is an IPSEC tunnel (pages 31-34). Both Massarani and Kent et al disclose a method of network communication security. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Kent et al within the system of Massarani because it would have increased security through a higher degree of authentication between the client and the access point.

As per claim 4, Massarani further discloses the assigned network address is sent to the client via the access point (fig 1 and col 4 ln 54- col 5 ln 5; It is noted that Massarani does not explicitly state the assigned address being sent to the client via the access point. However, according to figure 1, the communications system is set up in a way that data can only be forwarded to the client through an access point. Therefore, the assigned network address being sent to the client via the access point is to be inherent to the teachings of Massarani).

As per claim 5, Massarani discloses sending an IP address of an access point to the client (col 4 ln 32-53 and col 5 ln 1-5). Kent et al disclose sending the network address of an access point to establish an IPSEC tunnel with the access point corresponding to the network address (page 31-33). However, the combination of Massarani and Kent et al does not teach the address of the wireless access point that is sent to the wireless client comprises a MAC address. It would have been an obvious matter of design choice to modify the combination of Massarani and Kent et al by having address of the access point include the IP address and MAC address of the access point, since the applicant has not disclosed that using the MAC address of the access point for any particular purpose and it appears that the use of the IP address in establishing an IPSEC tunnel is efficient.

As per claims 9 and 17, Massarani discloses method for controlling access to a network by a wireless client (abstract), the wireless client using a network address having a lease period to communicate with the network (col 3 ln 60 – col 4 ln 9), the method comprising: engaging in a negotiation of a link with the client (col 3 ln 54-col 4 ln 9), communicating with an address server of the network to determine whether the lease period of the leased network address has expired (col 7 ln 1-43); and, if the lease period is determined to be expired, terminating the negotiation, thereby preventing the wireless client from accessing the network (col 7 ln 9-43).

Massarani discloses a client and an access point as described above and variations of wireless access technology (col 1 ln 45-50). However, Massarani does not explicitly teach the client and access point being a wireless client and a wireless access point. Wireless access points provide the same functions as regular access points except for the use of wireless clients. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention would have been able to adapt a wireless access point to provide access for a wireless client because it would have increased flexibility of Massarani's system by adding mobility to the client's terminals.

Furthermore, Massarani discloses establishing a negotiation for communication between a client and a network (abstract). However, Massarani does not explicitly teach negotiating of a secure link. Kent et al discloses a method of establishing communication between a client and a network by

establishing a secure link (page 7 section 3.3). Both Massarani and Kent et al disclose a method of network communication security. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Kent et al within the system of Massarani because it would have increased security through a higher degree of authentication between the client and the access point.

As per claims 10 and 18, Massarani does not explicitly teach establishing negotiation of a secure link. Kent et al discloses a method of establishing communication between a client and a network using a secure link (page 7 section 3.3), wherein the secure link is an IPSEC tunnel (pages 31-34). Both Massarani and Kent et al disclose a method of network communication security. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Kent et al within the system of Massarani because it would have increased security through a higher degree of authentication between the client and the access point.

As per claim 11, Massarani further discloses a DHCP server (fig 1, col 4 ln 54 - col 5 ln 5).

As per claims 12 and 19, Massarani discloses a method for controlling access to a network by a client (abstract), the method comprising: receiving a request for a network address from the client (col 5 ln 1-25); attaching



information to the request to indicate that the request originated from a client (MAC broad cast, col 6 ln 23-31); relaying the request to the address server (col 6 ln 32-40); receiving an assignment of an address from the address server (col 6 ln 41-65), the address having a lease time (col 7 ln 1-9); relaying the assignment to the wireless client (col 6 ln 40-54); negotiating the establishment of a link with the client (col 3 ln 54-65); and, if the lease time expires before the link is established, denying the client access to the network (col 7 ln 10-33).

Massarani discloses a client and an access point as described above and variations of wireless access technology (col 1 ln 45-50). However, Massarani does not explicitly teach the client and access point being a wireless client and a wireless access point. Wireless access points provide the same functions as regular access points except for the use of wireless clients. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention would have been able to adapt a wireless access point to provide access for a wireless client because it would have increased flexibility of Massarani's system by adding mobility to the client's terminals.

Furthermore, Massarani discloses establishing a negotiation for communication between a client and a network (abstract). However, Massarani does not explicitly teach negotiating of a secure link. Kent et al discloses a method of establishing communication between a client and a network by establishing a secure link (page 7 section 3.3). Both Massarani and Kent et al disclose a method of network communication security. It would have been

obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Kent et al within the system of Massarani because it would have increased security through a higher degree of authentication between the client and the access point.

As per claim 14, Massarani further discloses in response to the negotiation, creating an ARP entry that maps the IP address of the client to the MAC address of the client (ARP IP, col 6 ln 54-59).

As per claim 15, Massarani further discloses the request being a DHCP discover packet (col 6 ln 23-40), the method further comprising: inserting data into an optional field of the packet to indicate that the packet was received from a wireless client (MAC address, col 6 ln 23-31); and relaying the packet to the address server (col 6 ln 32-40).

As per claim 16, Massarani further discloses receiving a renewal request packet having a request for a renewal of the lease time from the wireless client (renew the request, col 7 ln 1-11); inserting data into an optional field of a request packet to indicate that the request packet was received from a client (MAC address, col 6 ln 23-31); and relaying the packet to the address server (col 6 ln 32-40) for a request for address information (col 5 ln 1-5).

Massarani does not teach the packet being a renewal packet. However, a renewal packet is to be inherent to the teachings of Massarani, as a renewal packet is needed for a request for renewal of the lease time as described above. Furthermore, Massarani discloses inserting data into an optional field of the renewal request packet to indicate that the renewal request packet was received from a wireless client; and relaying the renewal request packet to the address server. However, one of ordinary skill in the art would have been able to repeat the steps of requesting address information (as described above) in order to create a renewal of the lease time. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to repeat the steps for requesting an IP address for renewing the lease time of an IP address because it would have increased efficiency by eliminating additional hardware or software components.

Furthermore, Massarani does not explicitly teach allowing for renewal if a secure link is established. However, if a link is not established, then no communication would exist between the client and the access point. Therefore, allowing for renewal of the lease time if a link is established is to be inherent to the teachings of Massarani.

As per claims 21 and 26, Massarani discloses a method for gaining access to a network (abstract), the method comprising: broadcasting a request for an address on the network (col 3 ln 33-44 and col 5 ln 1-25); receiving an

assignment of a leased address from the network the leased address having a lease time (col 3 ln 36-63); and negotiating a link with the network before the lease time expires (col 3 ln 61- col 4 ln 9).

Massarani discloses a client and an access point as described above and variations of wireless access technology (col 1 ln 45-50). However, Massarani does not explicitly teach the client and access point being a wireless client and a wireless access point. Wireless access points provide the same functions as regular access points except for the use of wireless clients. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention would have been able to adapt a wireless access point to provide access for a wireless client because it would have increased flexibility of Massarani's system by adding mobility to the client's terminals.

Furthermore, Massarani discloses establishing a negotiation for communication between a client and a network (abstract). However, Massarani does not explicitly teach negotiating of a secure link. Kent et al discloses a method of establishing communication between a client and a network by establishing a secure link (page 7 section 3.3). Both Massarani and Kent et al disclose a method of network communication security. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Kent et al within the system of Massarani because it would have increased security through a higher degree of authentication between the client and the access point.

As per claims 22 and 27, Massarani further discloses the request for an address is broadcast as a DHCP discover packet (col 6 ln 23-40).

As per claims 23 and 28, Massarani does not explicitly teach establishing a secure link. Kent et al discloses a method of establishing communication between a client and a network using a secure link (page 7 section 3.3), wherein the secure link is an IPSEC tunnel (pages 31-34). Both Massarani and Kent et al disclose a method of network communication security. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Kent et al within the system of Massarani because it would have increased security through a higher degree of authentication between the client and the access point.

As per claims 24 and 29, Massarani further discloses teach generating an ARP packet (ARP IP, col 6 ln 54-58) having the network address given by the DHCP server as its destination address (selected IP address, col 6 ln 54-58); and, in response to the ARP generation, initiating a negotiation of a link with the network (col 6 ln 54-col 7 ln 57).

Massarani discloses establishing a negotiation for communication between a client and a network (abstract). However, Massarani does not

explicitly teach negotiating of a secure link. Kent et al discloses a method of establishing communication between a client and a network by establishing a secure link (page 7 section 3.3). Both Massarani and Kent et al disclose a method of network communication security. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Kent et al within the system of Massarani because it would have increased security through a higher degree of authentication between the client and the access point.

As per claims 25 and 30, Massarani further discloses the leased address is received in a packet with a network address of the router (col 5 ln 1-25). However, Massarani does not explicitly teach the packet further containing a MAC address of the access point. Furthermore, Massarani discloses negotiating a link with the access point (fig 4 and col 3 ln 55- col 4 ln 9). Kent et al discloses a method of establishing communication between a client and a network using a secure link (page 7 section 3.3). Both Massarani and Kent et al disclose a method of network communication. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Kent et al within the system of Massarani because it would have increased security through a higher degree of authentication between the client and the access point.

Kent et al disclose sending the network address of an access point to establish an IPSEC tunnel with the access point corresponding to the network address (page 31-33). However, the combination of Massarani and Kent et al does not teach the address of the wireless access point that is sent to the wireless client comprises a MAC address. It would have been an obvious matter of design choice to modify the combination of Massarani and Kent et al by having address of the access point include the IP address and MAC address of the access point, since the applicant has not disclosed that using the MAC address of the access point for any particular purpose and it appears that the use of the IP address in establishing an IPSEC tunnel is efficient.

4. Claims 13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Massarani, US Patent 6,393,484, in view of Kent et al, Security Architecture for IP, as applied to claim 12 above, and further in view of Cole et al, US Patent 5,854,901.

As per claims 13 and 20, Massarani further discloses terminating the negotiation, thereby denying the client access to the network if the MAC address is invalid. However the combination of Massarani and Kent et al does not does not teach terminating the negotiation, thereby denying the wireless client access to the network, by broadcasting an ARP packet to check whether there are any other clients having the same IP address of the wireless client; and, if a response to the ARP packet is received. Cole et al discloses broadcasting an ARP packet to check whether that are any other clients having the same IP address (Address

Resolution Protocol request, col 1 ln 50-65). If there is a response to the ARP packet is received, then the IP address is invalid (col 1 ln 50-65). Cole et al and the combination of Massarani and Kent et al disclose methods of network communication security. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Cole et al within the combination of Massarani and Kent et al because it would have increased efficiency by eliminating the need of the DHCP server of Massarani's teachings to keep track of all IP addresses.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fijolek et al, US Patent 6,577,642 discloses a method of restricting access to a network.

Lim et al, US Patent 5,884,024 discloses a method of accessing a network with a secure DHCP server.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen S. Wu whose telephone number is 703-305-0708. The examiner can normally be reached on Monday-Friday 9am-5pm.

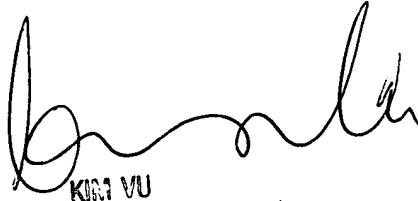
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 703-305-4393. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.



Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0900.

Allen S. Wu  
Examiner  
Art Unit 2135

ASW



KIM VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100